

ABSTRACT

A light-emitting diode with high luminous efficiency is provided which is free from deformation or defects of a crystal caused by a dopant. The light-emitting diode emits no light of unnecessary wavelengths and has a wide selection of emission wavelengths. The light-emitting diode comprises a light-emitting layer made of an ambipolar semiconductor containing no dopant, and an electron implanting electrode, that is, an n-electrode and a hole implanting electrode, that is, a p-electrode joined to the light-emitting layer.